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# The Reserve

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## Traffic Data Summary

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## The Reserve Traffic Data Summary

### Introduction

The following summary provides results from the traffic speed study conducted within the Reserve neighborhood in Cary, North Carolina. From the results of this data collection, traffic calming measures would be recommended by staff and supports the neighborhoods request. Moving forward, Town staff will meet with the HOA or designee to discuss the influence area and develop a concept plan.



### Average Daily Traffic

Average Daily Traffic (ADT) is the total vehicle volume during a given time period (in whole days), greater than one day and less than one year, divided by the number of days in that time period. It is common to see a fluctuation in the average daily traffic along a road. Therefore, these values listed below are averages of the 24 hour counts that are comprised in the data sets. The ADT data is presented below for the traffic counts that were conducted along Edgemore Avenue. This ADT is appropriate for this local road.

Road	Year	ADT (vehicles per day)
Edgemore Avenue	2017	1879

### Roadway and Speed Data

Speed data was collected along Edgemore Avenue from midnight on March 7, 2014 until midnight on March 9, 2017. Also, Edgemore Avenue is classified has a posted speed limit of 25 mph. The results of the data collection effort are provided.

Road	Date	Mean (Average) Speed (mph)		
		WB	EB	Average
Edgemore Avenue	3/2017	29	30	30

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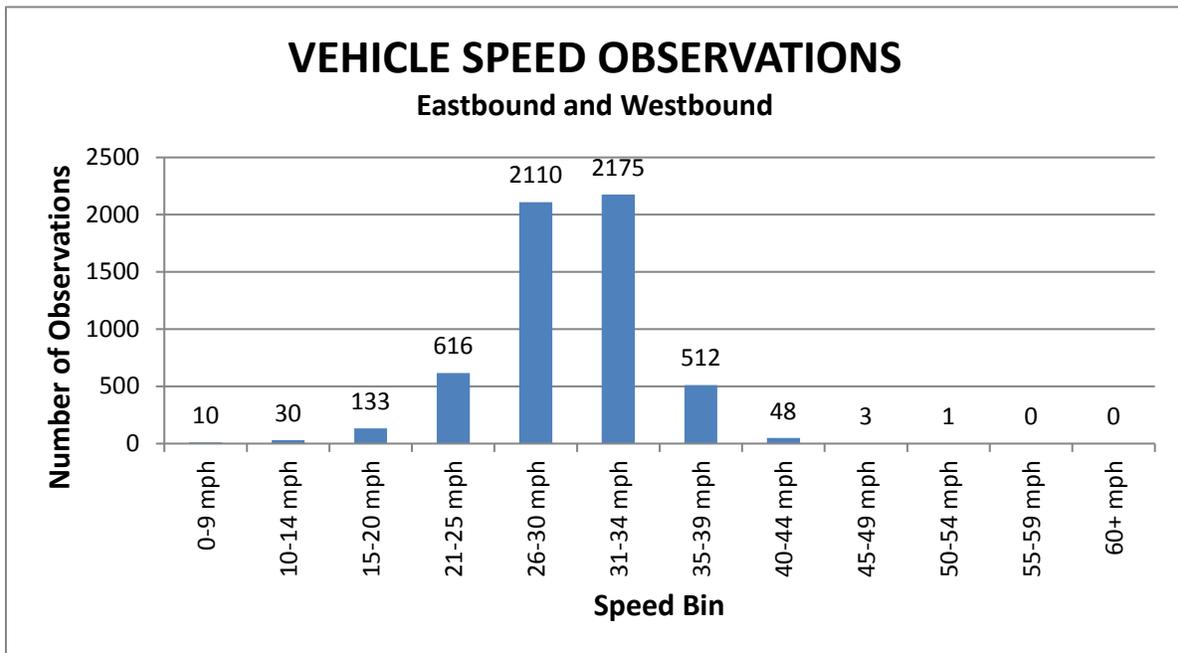
Road	Date	50 <sup>th</sup> Percentile Speed (mph)		
		WB	EB	Average
Edgemore Avenue	3/2017	29	30	30

Road	Date	85 <sup>th</sup> Percentile Speed (mph)		
		WB	EB	Average
Edgemore Avenue	3/2017	33	34	34

Based on the data collected, the speed results are higher than normal for a local road with a posted speed limit of 25 mph. Generally, the 85<sup>th</sup> percentile speed should closely resemble the posted speed limit/design speed of the road, which the data indicates is 34 mph and significantly above the 25 mph speed limit.

### Number of Vehicles Detected in Each Speed Bin

Most traffic streams have speeds that are normally distributed. This means that most values for speed typically occur in a central range, with fewer values occurring outside of this range on either the high or the low side. Few drivers will drive extremely fast or extremely slow in comparison to others. The figure below shows the comparison of the speed distributions and the number of vehicles detected in each speed bin.

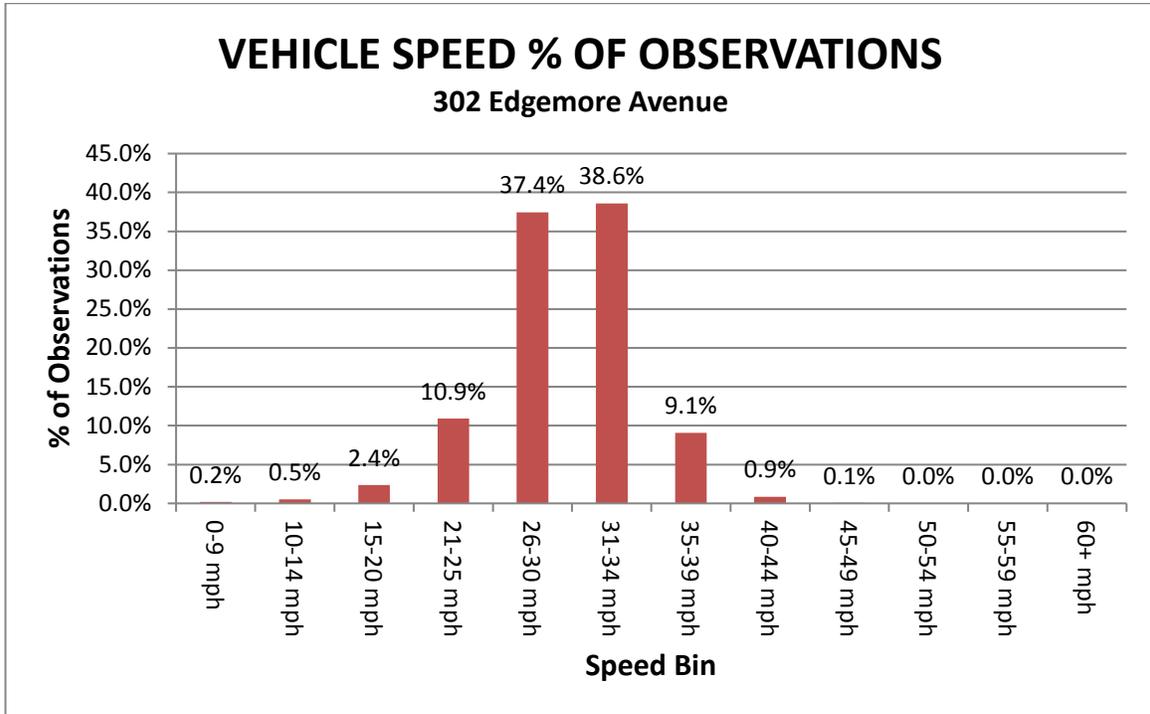


The figures above show the pattern of speed distribution at the count locations on Edgemore Avenue. Based on the data, the locations do exhibit a pattern of normal distribution, as the bulk number of observations is in a central range and the average speeds range from 26 to 34 mph.

### Percentage of Vehicles in Each Speed Bin

The next figure shows the comparison of the percentage of observations detected in each speed bin for both locations.

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Based on the percentage of observations for each speed bin, the highest percentage of vehicles travel between the speeds of 26 to 34 mph. The speed bin ranges indicate a large percentage of vehicles are driving above the posted speed limit of 25 mph. It is common to see 1-2% of the speeds in a ticketable range which tends to be 10 mph over the speed limit for this roadway type and vehicular volume. This data shows 10.1% of speeds in this range which is significantly above average for this street classification.

### Volumes

There were 5,638 total vehicles observed over the 72 hour period; 2,715 were headed in the westbound direction and 2,923 were headed in the eastbound direction.

Data Collection Date	AM Peak Hour	EB and WB Combined Volume	PM Peak Hour	EB and WB Combined Volume
3/7/17	8:00 AM	188	5:00 PM	192
3/8/17	8:00 AM	167	5:00 PM	185
3/9/17	8:00 AM	195	6:00 PM	190

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<b>Data Collection Date</b>	<b>AM Peak Hour</b>	<b>EB Volume</b>	<b>PM Peak Hour</b>	<b>EB Volume</b>
3/7/17	8:00 AM	113	4:00 PM	83
3/8/17	8:00 AM	107	5:00 PM	81
3/9/17	8:00 AM	113	5:00 PM	92

<b>Data Collection Date</b>	<b>AM Peak Hour</b>	<b>WB Volume</b>	<b>PM Peak Hour</b>	<b>WB Volume</b>
3/7/17	8:00 AM	75	5:00 PM	109
3/8/17	8:00 AM	60	5:00 PM	104
3/9/17	8:00 AM	82	6:00 PM	107

### **Conclusion**

Edgemore Avenue from NC-55 to Briardale Avenue is classified as a collector street and not eligible for traffic calming measures. Edgemore Avenue from Briardale Avenue to Sears Farm Rd is classified as a local street and eligible for traffic calming. From the results of this data collection, traffic calming measures would be recommended by staff and supports the neighborhoods request. Moving forward, Town staff will meet with the HOA or designee to discuss the influence area and develop a concept plan.